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PATENT**IN THE UNITED STATES PATENT AND TRADEMARK  
OFFICE**

**Applicant:** STOTZEL, ET AL.  
**Serial No.:** 10/549,969  
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**For:** RHEOLOGICAL ADDITIVE

**Examiner:** Unknown  
**Group Art Unit:** 1711  
**Docket No.** VOS0042/US

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Pursuant to the duty of disclosure imposed by 37 C.F.R. § 1.56 and in accordance with the provisions of 37 C.F.R. §§ 1.97, 1.98 and the Manual of Patent Examining Procedure 609, Applicants bring to the attention of the Examiner the following information. The Examiner's independent and thorough review of this information is solicited.

Attached hereto please find Form PTO-1449 listing the cited references. Requires copies of the cited references are also enclosed. The Examiner is requested to indicate consideration of each reference by initialing in the appropriate box for each reference, and returning an initialed copy with the next official action.

Each information disclosure statement must include a concise explanation of the relevance, as it is presently understood by the individual designated in Section 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language. Therefore, below an explanation of each such reference or piece of information cited in the attached Form PTO-1449 is included.

1. Data sheet of the product "Kärlicher Blauton" provided by the first "Kärlicher Ton-und Schamottwerke Mannheim & Co. KG."

“Kärlicher Blauton (it should correctly read “Kärlicher Blauton” and not “Klärlicher Blauton”) is cited in the application as an Example of illite clay (see penultimate paragraph on page 5 of the English version of the application). It is not clear when the data sheet was published. The data sheet describes data of a clay commercially available under the trademark “Kärlicher Blauton.” Page 1 contains four tables, wherein table 1 relates to the chemical analysis, table 2 relates to the analysis of sedimentation, table 3 relates to the mineral analysis and table 4 as well as the tables on page 2 describe some technological properties.

2. An excerpt of “Römpp-Lexicon Chemie,” 10<sup>th</sup> edition (1997) concerning the key word “Illit” (illite).

The excerpt describes the mineral “illite” in a general way indicating that this term is a generic term for three layer clay minerals of the mica type.

3. Kromer, H. Rose, D., “Der Einfluß des Stoffbestandes auf das Verflüssigungsverhalten von Tonen” (The Influence of the Material Phases on the Liquefying Property of Clays), cfi/Ber DKG 71 (1994), No. 5, 245-249.

The article is a scientific report with respect to the influence of the material phases on the liquefying property of clays. An English translation of the abstract can be found on page 1, right column, first paragraph of the article.

4. Jasmund, K., Lagaly, G. (editors), “Tonminerale und Tone” (clay minerals and clays), Steinkopff-Verlag Darmstadt (1993), 316-317, 360-363.

Pages 316 and 317 of the reference describe the plasticity of clays such as kaolinite, illite and montmorillonite. Pages 360 to 363 describe technical applications and use forms of vermiculite, mica, talc, pyrophyllite, attapulgite, sepiolite, kaolins, and crude bentonites.

5. Rudolph, S., Förster, H. “Beitrag zur Kenntnis des Aufbaus und der Zusammensetzung von Form- und Kernschwärzen” (structure and composition of mold and core blackings), Gießerei-Praxis 22/92 (1992), 347-358.

The abstract of the reference on page 357, item 4 indicates that blackings (black washes) consist usually of carbon carrier substances such as coke dust or coke dust and graphite. To these components fire resisting clays are added. Depending on the application, further components are usually added, such as dextrine and sulphite waste liquor as binder at room temperature. For suppressing casting defects, iron oxide can be added. In this report selection criteria for components to be used in blackings as well as their contents are described.

6. Weiss, A.: “Die innerkristalline Quellung als allgemeines Modell für Quellungsvorgänge” (the inner crystalline swelling as general model of swelling behaviour), Chemische Berichte Jahrg. 91 (1958), 487-502.

According to the abstract on page 487 of the reference, the one-dimensional, inner crystalline swelling is predominantly dependent from the size of the equivalent area, from the charge and the size of the counter ions and from the salvation behaviour of the counter ions and the swelling structural units. Hydrogen bonds can have different influences on the swelling behaviour. The pH value has only notable influence in such cases if the number of charges on the swelling structural units and the counter ions per unit of area, that is the size of the equivalent area, changes as well if it is changed. The two-dimensional swelling of polyphosphates and deoxyribonucleic acids and the mainly disordered swelling of proteins seem to be affected by similar factors.

7. Hofmann, U.: "Aus der Chemie der hochquellfähigen Tone (Bentonite)" (regarding the chemistry of highly swellable clays (bentonits)), *Angewandte Chemie*, 68, No. 2 (21 January 1956), 53-80.

The article indicates in the abstract on page 53 that highly swellable clays and bentonits contain as decisive clay mineral montmorillonite which appears in many varieties which can be distinguished by its chemical composition. Common to all is the fact that they can form layer lattices which may swell inner crystallinely and provide in connection therewith a very high cationic exchange capacity. Inner crystalline swelling and cation exchange capacity are the reason for the technical application of these materials in foundry sand, in ceramics, in drilling fluids, in building industries, for stabilizing wine and beer and for the production of isolating agents.

8. Excerpt of Römpps Chemie-Lexikon, eighth edition (1979), key word "Attapulgit" (attapulgit).

The excerpt indicates that "palygorscrite" is a type of attapulgit.

Documents E1 and E30 have been filed by the opponent as a kind of evidence for the alleged public prior use. In his opposition brief dated November 28, 2007, the Opponent alleges that before the priority date of the patent in suit, the products "Arkopal T" and "Disopast 5000" (sometimes also referred to as "Disopast TN 5000") were commercially available and provided without obligation of secrecy. It seems that beside documents E24 and E25 all other documents were not publically available. The publication date of E30 is not disclosed on the provided copy.

9. Formulation of "Arkopal T."

In an opposition to the correlating European Patent to the present case, the opponent alleges that Arkopal T was commercially available prior to the priority date of the European patent. It is unclear, however, when the provided formulation was commercially available.

10. Formulation of "Disopast TN 5000."

In an opposition to the correlating European Patent to the present case, the opponent alleges that Disopast TN 5000 was commercially available prior to the priority date of the European patent. However, it is unclear when this formulation was commercially available.

11. An affidavit of Mr. Klaus Seeger.

In this affidavit, Mr. Seeger affirms that the products "Arkopal T" and "Disopast TN 5000" were prepared without any changes since the years 1993 and 1990, respectively. He alleges that these products are mainly used by the customers as so-called washes.

12. An excerpt of an analysis of article/supplier, dated January 5, 1993.

13. A preliminary data sheet concerning "Arkopal T." However, it is unclear whether this data sheet was published.

14. A data sheet concerning "Disopast 5000."

The data sheet indicates that the described product can be used as a wash, but does not disclose any composition thereof.

15. An excerpt of Römpps Chemie-Lexikon, eighth edition (1987) regarding the key word "Poren" (pores).

16. Huttenes-Albertus shipping lists, dated February 19, 1992 and March 12, 2002.

The lists point to the product "Disopast 5000."

17. A computer-generated hard copy of a certification report according to DIN concerning the product "Arkopal T."

It does not describe any composition of this product, but only technological data thereof.

18. An affidavit of Mr. Thomas Linke.

Mr. Linke is allegedly product manager of the Opponent in the opposition to the European Patent since 1997 and indicates that the products "Arkopal T" and "Disopast 5000" were delivered to different customers in the home country and foreign countries. He also indicates that the above products were used as washes.

19. An excerpt of the index of contents of the textbook "Tone und Tonminerale" (clays and clay minerals).


However, provided copy does not disclose the publication date of this document.

This Information Disclosure Statement is filed pursuant to 37 C.F.R. § 1.56 to bring to the Examiner's attention those references which may be material to the Examiner for examination of this case. However, the citation of the above references in this Information Disclosure Statement is not intended to constitute an admission that any patent or other reference referred to herein is "prior art" for this invention. In this regard, Applicants expressly reserve the right to contest that any of the references constitute "prior art."

No fee is believed to be necessary for the consideration of this Information Disclosure Statement since it is being filed before the receipt of an Office Action on the merits. In case the papers cross in the mail, it is requested that consideration of this Information Disclosure Statement be given under 37 C.F.R. § 1.97 (c)(2). If any fee is required, please charge our Deposit Account No. 50-1775 and notify us of the same.

Dated: March 18, 2008

Respectfully Submitted,

  
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